
Buffer Amplifier Box for Analog Input Boards

ATBA-16L, ATBA-8L User's Manual

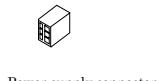
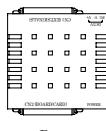
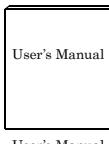
CONTEC CO., LTD.

Thank you for purchasing the CONTEC product.

The product consists of the items listed below. Check, with the following list, that your package is complete. If you discover damaged or missing items, contact your retailer.

Product Configuration List

- Termination Panel (One of the following)...1
[ATBA-16L or ATBA-8L]
- Power supply connector (MC1,5/3-ST-3,5)...1
- This User's Manual...1



Power supply connector

⚠ CAUTION

- Use this product in the specified environment (temperature and humidity).
- Do not use or store the product in a location exposed to extremely high or low temperature or susceptible to rapid temperature changes.
For example:
 - Do not exposure to direct sunlight
 - In the vicinity of a heat source
- Clean the ATBA-16L/ATBA-8L by wiping lightly with a soft cloth moistened with water or a cleaning solution.
Take care to avoid the use of benzene, thinners or other volatile solutions which may cause deformation or discoloration.
- CONTEC will bear no responsibility for any problems, etc., resulting from modifying this product.
- When carrying the product, be careful not to apply direct vibration or shock to the product.
- The information in this document is subject to change without notice.
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About the Terminal

ATBA-16L, ATBA-8L is purposed to add-buffer amplifier-function to CONTEC analog input boards/cards.

This product reduces signal-crosstalk in case of inputted analog signals are low response speed.

Moreover, ATBA-16L, ATBA-8L enables steady signal measurement, since the buffer amplifier can reduce possible signal noise that may come from a long connection cable.

Features

Buffered by high speed high accuracy amplifiers

This terminal has equipped high response speed high accuracy amplifiers, the inputted analog signals can be truthfully transferred to our analog input board/card. And because of the high input impedance of buffer amplifiers, the influence applied to the output impedance of signal source can be limited to a very low level.

Crosstalk Prevention

This board/card is used to prevent the crosstalk while analog signals of low response speed sources are being inputted to the analog input board/card.

Compact designing

With its compact designing, you can carry it easily after simply removed the connection cables.

Aluminum Dustproof Cover-Box

The cover-box is lightly designed by using aluminum in consideration of portability.

Setup Hardware

This section explains the components of the terminal and how to set up.

Parts of the Terminal

Figure 1 shows the major parts of the terminal.

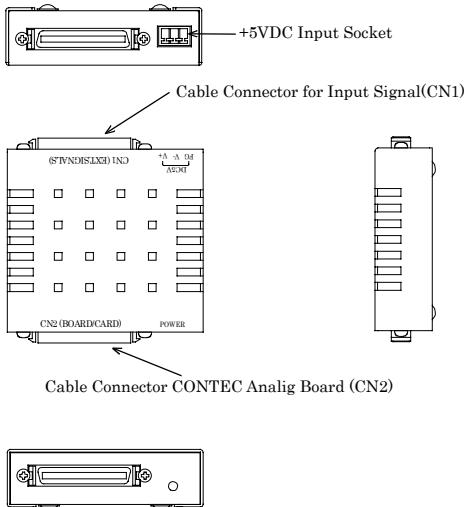


Figure 1. Component Locations

CN1: The connector used to connect analog input signal sources.

(Pin assignment of CN1 is the same as corresponding analog input board/card used.)

CN2: The connector used to connect the CONTEC analog input board/card.

Connect a Board/Card

Board/Card Connection

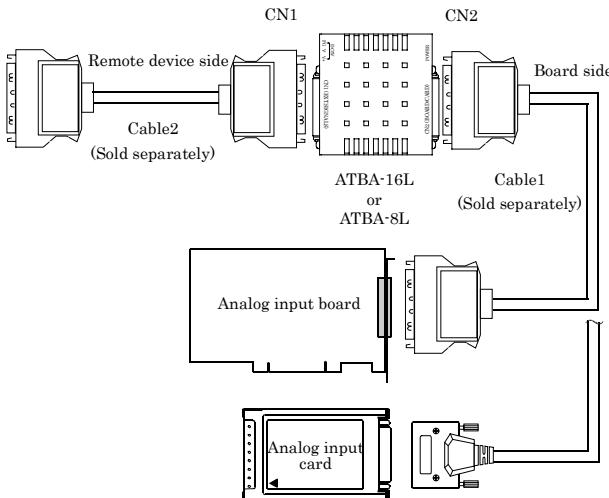


Figure 2. Board/Card Connection

Correspondence Products (Optional)

Board for LowProfile PCI : ADA16-8/2(LPCI)L, AD16-16(LPCI)L, ADAI16-8/2(LPCI)L,
ADI16-16(LPCI)L

Card for CardBus : ADA16-8/2(CB)L

Cables (Optional)

Shielded cable with a 50-pin mini-ribbon connectors on 2 Ends

: PCB50PS-0.5P (0.5m)

: PCB50PS-1.5P (1.5m)

Shielded cable with a 50-pin mini-ribbon connectors to open-ended

: PCA50PS-0.5P (0.5m)

: PCA50PS-1.5P (1.5m)

68/50-pin conversion shielded cable for analog input/output

: ADC-68M/50M (0.5m) *1

*1 ATBA-16L, ATBA-8L uses this cable when connecting the PC card.

Connecting an External Power Supply

Because the corresponding analog board/card have not voltage output, an external power supply is required to make the terminal work.

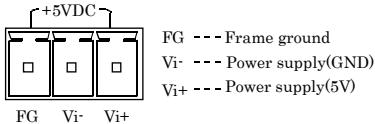


Figure 3. Pin Assignment of +5 VDC input Socket

Table 1. Specification of External Power Supply

Items	Specification
Power Voltage	5VDC
Voltage Tolerance	$\pm 5\%$
Current Capacity	0.4A or larger

A bundled connector plug (MC1,5/3-ST-3,5, Phoenix Contact. Suitable wire: AWG28 - 16) can help you to connect the external power supply.

When you using this MC1,5/3-ST-3,5 plug to connect the external power supply, please strip the end of the corresponding-wire, insert it into the connector plug, then fix the screw to secure.

There is an optional AC adapter-available from CONTEC.

Accessories (Optional):

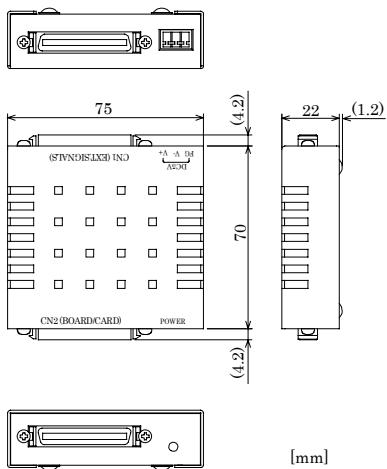
AC adapter (Input: 90 - 264VAC, Output: 5VDC 2.0A): POA200-20

- When using the external power supply:
The terminal can provide the maximum power supply of 5VDC, 2A.

⚠ CAUTION

- To use the AC adapter, please connect it to the terminal first, then plug the AC adapter-into a outlet.
- When the terminal is not used, please leave the AC adapter unplugged.
- Continuously using the AC adapter under high temperature environment will affect its life.
- Use the AC adapter not in a closed place but in a well-ventilated place. The AC adapter heats up itself when loaded heavily. If the AC adapter is exposed to high temperature or used continuously, you should keep the load at about 80% of the maximum load.

Dimensions



[mm]

Figure 4. Dimensions

Specifications

Table 2. Specifications of ATBA-16L/ATBA-8L

Item	ATBA-16L	ATBA-8L
Analog Input (Buffer Amplifier Part)		
Insulated specification	Un-Isolated	
Absolute max. input voltage	±15V	
Number of Input Channels *1	Single-Ended Input: 16ch or Differential Input: 8ch	Single-Ended Input: 8ch or Differential Input: 4ch
Input voltage range	-10V ~ +10V	
Input Impedance	1MΩ or more	
Non-Linearity error *1	±0.03% of FSR	
CN1 Connector Assignment	The same definition as the used AD board/card ATBA-8L: only CH0 - CH7 have buffer amplifier. (other 8 channels are straight-connected).	
External power supply	5VDC, 0.4A (Max.)	5VDC, 0.3A (Max.)
Operating Conditions	0 ~ 50°C, 10 ~ 90%RH (No condensation)	
Dimensions (mm)	75(W) x 70(D) x 22(H) (No protrusion)	
Weight	100g	
Supported Products	ADA16-8/2(LPCDL), AD16-16(LPCDL), ADA16-8/2(CBL), ADAI16-8/2(LPCDL), ADI16-16(LPCDL)	

*1: It depends on the number of AD board's/card's input channels.

*2: When the environment temperature is 0°C or 50°C, the maximum non-linearity error is 0.04% of full input range.

Table 3. Specifications of Interface Connector CN1, CN 2

Type of Connector	10250-52A2JL[mfd by 3M]
Type of mating connector (option)	10150-6000EL[mfd. by 3M]
Connecting Cable (option)	PCB50PS-0.5P, PCB50PS-1.5P PCA50PS-0.5P, PCA50PS-1.5P ADC-68M/50M

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